Northeast District Office
Waste Management & Engineering
2110 East Aurora Road
Twinsburg, Ohio 44087

File

December 5, 1974

Re: Zirconium Corporation of America
Cuyahoga County
Industrial Waste

Zirconium Corporation of America
P.O. Box 39217
Solon, Ohio 44139

Attn: Mr. Doug McBride

Gentlemen:

In reference to your question as to the requirements for dischargers from laboratories, you should find enclosed a copy of a page from an Ohio EPA manual on water supply, sewage and sewage treatment pertaining to the above.

Sincerely yours,

Dennis E. Lee

Dennis E. Lee
District Engineer

DEL/fmk

Encl (1)

Sewerage & Sewage Treatment

Treatment Requirements

All sewage must be treated before discharge into the waters of the State of Ohio or any drainage facility. Sewage includes the drainage from:

Toilet and bath fixtures	Floor drains
Kitchen fixtures	Drinking fountains
Service fixtures	Laundry equipment
Laboratories	Manufacturing wastes

Wastes from commercial laundries and manufacturing processes are considered as Industrial Wastes and must be given special treatment and consideration. Wastes from laboratories are corrosive wastes and must be given special consideration. (See Chapter BB 51-53 OBC). Waste from swimming pool filter backwash must be given special consideration.

Roof drainage, foundation drainage, cooling waste, swimming pool water, or other clear water wastes need no treatment and shall not be connected to the sanitary sewer system.

In general the type and degree of treatment will be determined by the location, condition, volume of flow, and use of the receiving stream. The type of soil and the extent and type of development of the surrounding area must be considered in the selection of the type of treatment plant to be used.

Where sewage collection systems are available, or may be made available by feasible and reasonable extension of the system, such facilities shall be used and individual treatment facilities will not be approved.

Sewers

Sanitary sewers shall be designed on a peak flow basis using a peak factor of four times the total calculated average daily wastewater flow for lateral sewers, and a peak factor of 2.5 for sub-mains and trunk sewers. Pumps and force mains should be designed to carry the peak flow of all the sewers that discharge into the lift station. The peak daily flow for areas which do not have a 24-hour run-off period shall be calculated as follows:

$$\text{Peak Factor} \times \frac{\text{(Calculated Wastewater Flow} \times \text{24 hrs.)}}{\text{Run-Off Period (in Hours)}} = \underline{\qquad\qquad} \text{ gpd}$$

Peak Factor = 4.0 for Lateral Sewers
= 2.5 for Sub-Mains And Trunk Sewers

Entity	Run-Off Period
Municipality	24 hours
Factories	length of shift
Subdivisions > 250 homes	24 hours
Subdivisions < 250 homes	16 hours
Hospitals	12-24 hours
Camps	16 hours
Public Schools	8 hours
Restaurants	4 hours
Boarding Schools	16 hours
Mobile Home Parks	12 hours
Apartments	12 hours
Motels	4 hours

(Other run-off periods must be documented.)

All sanitary sewers shall be designed to give a mean velocity of at least 2.0 feet per second, when flowing full, based on Manning's formula using an "n" value of 0.013. Use of other "n" values will be considered if deemed justifiable on the basis of extensive field data.